

METHOD AND APPARATUS FOR HIERARCHICAL Z BUFFERING AND STENCILING

Abstract Of The Disclosure

A method and apparatus for hierarchical Z buffering stenciling includes comparing an input tile Z value range with a hierarchical Z value range and a stencil code. The method and apparatus also updates the hierarchical Z value range and stencil code in response the comparison and determines whether to render a plurality of pixels within the input tile based on the comparison of the input tile Z value range with the hierarchical Z value range and stencil code. In determining whether to render the tile, a stencil test and a hierarchical Z value test is performed. If one of the test fails, the tile is killed as it is determined that the pixels are not visible in the graphical output. If the stencil test passes and the hierarchical Z test passes, the pixels within the tile are rendered, as it is determined that the pixels may be visible.